

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 6, and 12 are amended. Reconsideration of pending claims 1-12 is respectfully requested.

AMENDMENT OF INDEPENDENT CLAIMS 1, 6, AND 12.

Independent claims 1, 6, and 12 are amended and patentably distinguish over the references relied upon by the Examiner and are supported by the originally filed specification.

Claims 1-5

In the Office Action, at page 2, numbered paragraph 3, the Examiner rejected claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Aono et al. (U.S. Patent No. 5,859,668) (hereinafter, "Aono") in view of Saunders et al. (U.S. Patent No. 6,608,866) (hereinafter, "Saunders"). Claim 1 has been amended and patentably distinguishes over the references relied upon by the Examiner.

The primary reference relied upon by the Examiner, Aono, relates to a moving image coder in which a prediction mode is estimated by using only forward and backward prediction error amounts without calculating a bi-directional prediction error amount. As admitted by the Examiner, Aono does not adaptively control the number of repeated B pictures to be inserted into a stream based on the compared result of the comparison process. Aono, column 6, lines 7-38.

The secondary reference relied upon by the Examiner, Saunders, relates to a digital video processing apparatus in which an output compressed video signal is derived from an input compressed video signal. The input compressed video signal represents successive input pictures, in which the subsets of the pictures are derived from other pictures in accordance with a repetitive group of pictures structure. Saunders, column 3, lines 10-55.

Independent claim 1 of the present application, as amended, recites: "An image control apparatus for controlling a process of coding an image signal, comprising: ... repetitive number control means for adaptively controlling the number of repeated B pictures to be inserted into a stream based on the compared result of the comparison process which is carried out by said comparison processing means, and increasing or decreasing the number of the B pictures in the stream during the process of coding the image signal." Thus, claim 1 discloses that the

repetitive number control means for adaptively controlling the number of repeated B pictures to be inserted into a stream based on the compared result of the comparison process which is carried out by the comparison processing means, and increasing or decreasing the number of the B pictures in the stream during the process of coding the image signal.

In view of the foregoing, Applicant disagrees with the Examiner's assertion that Saunders discloses the repetitive number controls means as discussed above. In particular, the Examiner asserts in the Office Action that the repetitive control means is disclosed in column 3, lines 20-45 and lines 47-54 of Saunders. The cited text of Saunders relates specifically to converting an I frame to a P frame and converting a B frame to another B frame with different reference frames. Saunders, column 3, lines 20-45, lines 47-54. Saunders fails to teach or suggest the feature of "adaptively controlling the number of repeated B pictures to be inserted into a stream" and "increasing or decreasing the number of the B pictures in the stream during the process of coding the image signal."

Therefore, for at least the reasons discussed above, independent claim 1 patentably distinguishes over the references relied upon by the Examiner.

Claims 2-5 of the present application depend from independent claim 1. Therefore, for at least the reasons that claim 1 patentably distinguishes over the references relied upon by the Examiner, it is respectfully submitted that claims 2-5 also patentably distinguish over the references relied upon by the Examiner.

Claims 6-11

In the Office Action, at page 4, numbered paragraph 4, the Examiner rejected claims 6-11 under 35 U.S.C. 103(a) as being unpatentable over Kazui et al. (U.S. Patent No. 5,642,174) (hereinafter, "Kazui") in view of Toebe, VIII et al. (U.S. Patent No. 5,959,690) (hereinafter, "Toebe"). Claim 6 has been amended and patentably distinguishes over the references relied upon by the Examiner.

The primary reference relied upon by the Examiner, Kazui, relates to a scene changing detecting device for detecting the position of a frame using data that has already been compressed and coded. The apparatus includes extracting means for extracting frame type information indicative of the type of a predictive process for frames. Kazui, column 2, lines 24-48.

The secondary reference relied upon by the Examiner, Toebe, relates to an apparatus for providing a personal computer with access to an MPEG video stream at any frame, in

particular, providing random playback and reverse playback of a digitally compressed video bitstream. The apparatus generates a stream of bi-directional dependent duplicator frames having motion vector references to a past reference frame and a future reference frame to be used during playback operations. Toebes, column 7, lines 34-64.

Independent claim 6 of the present application, as amended, recites: "An image control apparatus for controlling a process of coding an image signal, comprising: ... picture insertion control means for inserting an I picture in to a stream during the process of coding the image itself if a scene change is detected by said scene change detecting means, and inhibiting a reference to a predicted value across and over the I picture which is inserted as a scene changing view."

In view of the foregoing, Applicant disagrees with the Examiner's assertion that the picture insertion control means is disclosed in column 18, lines 27-67 and column 19, lines 1-54 of Toebes. The cited text of Toebe s relates specifically to generating a stream of bidirectionally dependent duplicator frames (I or P picture) in decoding. Toebes, column 18, lines 27-67 and column 19, lines 1-54. Toebes fails to teach or suggest the feature "inserting an I picture into a stream during the process of coding the image signal" and "inhibiting a reference to a predicted value across and over the I picture which is inserted as a scene changing view," as disclosed in claim 6 of the present application.

Therefore, for at least the reasons discussed above, independent claim 6 patentably distinguishes over the references relied upon by the Examiner.

Claims 7-10 of the present application depend from independent claim 6. Therefore, for at least the reasons that claim 6 patentably distinguishes over the references relied upon by the Examiner, it is respectfully submitted that claims 7-10 also patentably distinguish over the references relied upon by the Examiner.

Claim 12

In the Office Action, at page 6, numbered paragraph 5, the Examiner rejected claim 12 under 35 U.S.C. 103(a) as being unpatentable over Aono in view of Toebes and further in view of Kazui. Claim 12 has been amended and patentably distinguishes over the references relied upon by the Examiner.

Independent claim 12 of the present application, as amended, recites: "An image control apparatus for controlling a process of coding an image signal, comprising: ...repetitive number control means for adaptively controlling the number of repeated B pictures to be inserted into a

stream based on the compared result of the comparison process which is carried out by said comparison processing means, and increasing or decreasing the number of the B pictures in the stream during the process of coding the image signal; ... and picture insertion control means for inserting an I picture into a stream during the process of coding the image signal if a scene change is detected by said scene change detecting means, and inhibiting a reference to a predicted value across and over the I picture which is inserted as a scene changing view.”

In view of the foregoing claim language and the argument relating to independent claims 1 and 6, claim 12 patentably distinguishes over the references relied upon by the Examiner. In particular, Applicant disagrees with the Examiner’s assertion that Saunders discloses the repetitive number controls means as discussed above. The cited text of Saunders relates specifically to converting an I frame to a P frame and converting a B frame to another B frame with different reference frames. Saunders, column 3, lines 20-45, lines 47-54. As such, Saunders fails to teach or suggest the feature of “adaptively controlling the number of repeated B pictures to be inserted into a stream” and “increasing or decreasing the number of the B pictures in the stream during the process of coding the image signal.”

Further, Applicant disagrees with the Examiner’s assertion that Toebes discloses a picture insertion control means. The cited text of Toebes relates specifically to generating a stream of bidirectionally dependent duplicator frames (I or P picture) in decoding. Toebes, column 18, lines 27-67 and column 19, lines 1-54. As such, Toebes fails to teach or suggest the feature “inserting an I picture into a stream during the process of coding the image signal” and “inhibiting a reference to a predicted value across and over the I picture which is inserted as a scene changing view,” as disclosed in claim 6 of the present application.

Therefore, for at least the reasons discussed above, independent claim 12 patentably distinguishes over the references relied upon by the Examiner.

CONCLUSION

In accordance with the foregoing, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, the application is submitted as being in condition for allowance which action is earnestly solicited.

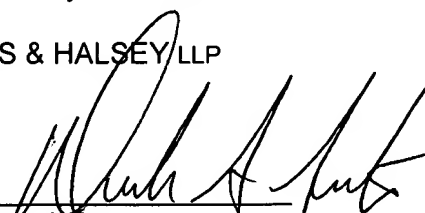
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: 
Derek A. Auito
Registration No. 52,576

1201 New York Avenue, N.W.
Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501